

## ABSTRACT

A coreless AC linear motor including rows of field magnets (31, 32) forming a magnetic gap (3), a plurality of coreless coils (5) arranged in a straight line in the magnetic gap, a can (10) for housing the coreless coils, and a cover body (11) for sealing up the can. The can includes a coil housing section (10F) having a deep groove (10B), and a flange section (10A) joined to the cover body. The deep groove is formed by gouging out material formed from stainless steel using an end mill, a drill, and an electric discharge machining electrode. After inserting the coreless coils into the deep groove, the coreless coils are fixed to the can using resin or adhesive (6). An O-ring (12) for sealing between the can and the cover body in an air-tight manner is provided, and a seat (10C) for receiving the O-ring is formed in the flange section.

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